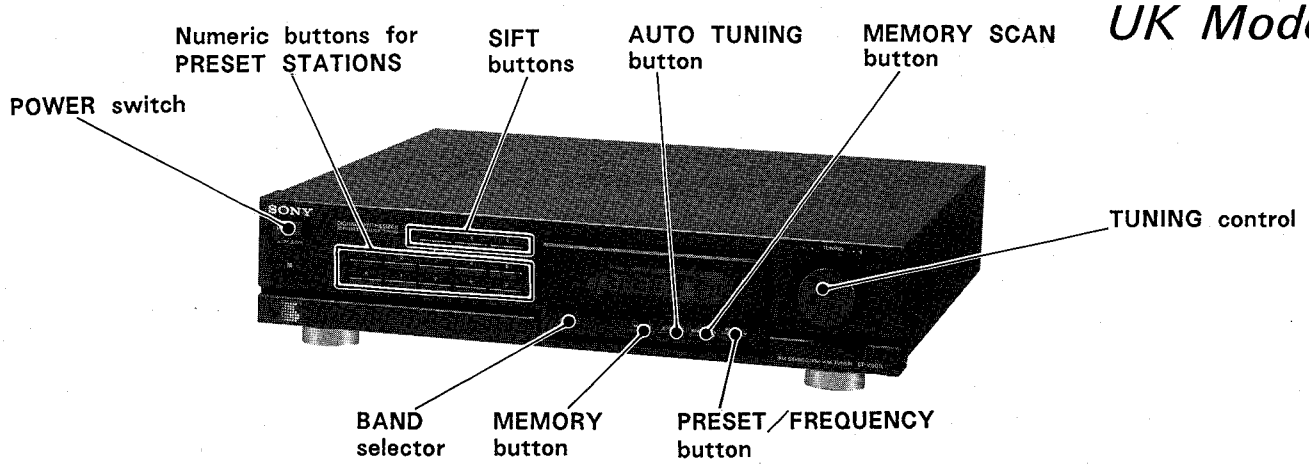
ST-V901L

SERVICE MANUAL

AEP Model
UK Model



SPECIFICATIONS

Tuner

Circuit system: FM stereo, FM/AM superheterodyne tuner
Quartz-locked PLL digital synthesizer system

FM tuner

Frequency range	87.5 – 108 MHz
Antenna terminals	75 ohms unbalanced
Intermediate frequency	10.7 MHz
Sensitivity	(at 46 dB quieting) 19.5 dBf, 5.0 μV (mono) 39.5 dBf, 50 μV (stereo)
Signal-to-noise ratio	(at 40 kHz deviation) 75 dB (mono) 69 dB (stereo)
Harmonic distortion	0.5% (mono), 1.5% (stereo) at 1 kHz
IM distortion	0.5% (mono), 1.5% (stereo)
Separation	45 dB (at 1 kHz)
Frequency response	40 Hz – 12.5 kHz ±0.5 dB
Selectivity	55 dB (at 300 kHz)
Capture ratio	1.0 dB
AM suppression ratio	55 dB
Image response ratio	40 dB
IF response ratio	80 dB
Spurious response ratio	80 dB
Output	400 mV, 4.7 kohms (at 40 kHz deviation)

MW/LW tuner

	MW	LW
Tuning range	522 to 1,611 kHz (Italian model) 531 to 1,602 kHz (AEP, UK, West Germany model)	144 to 288 kHz (Italian model) 153 to 281 kHz (AEP, UK, West Germany model)
Antenna	AM loop antenna, external antenna terminal	
Intermediate frequency	450 kHz	

When the supplied AM loop antenna is used.

	MW	LW
Usable sensitivity	(999 kHz) 500 μV/m	(230 kHz) 700 μV/m
Signal-to-noise ratio	(999 kHz) 54 dB	(230 kHz) 50 dB
Harmonic distortion (400 Hz)	0.3%	0.3%
Selectivity (9 kHz)	35 dB	35 dB

— Continued on page 2 —

MICROFILM

FM STEREO/FM-AM TUNER

SONY®

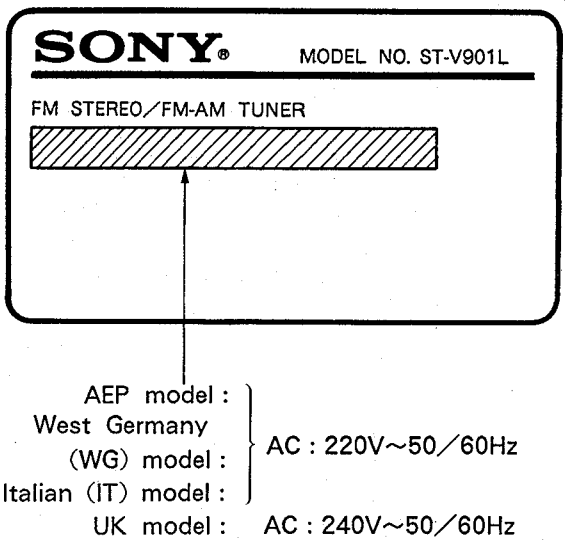
General

Power requirements	U K model: 240V AC, 50/60 Hz AEP, West Germany, Italian model: 220V AC, 50/60 Hz
Power consumption	10 W
AC outlet	2 unswitched, max. 100W
Dimensions	Approx. 355 × 82 × 324 mm (w/h/d) (14 × 3 1/4 × 12 7/8 inches)
Weight	Approx. 2.3 kg (5 lb 2 oz)
Accessories supplied	Connecting cord (1) FM antenna (1) (Except for West Germany model) AM loop antenna (1) RM-S920 remote commander (1) Sony SUM-3 (NS) batteries (2) Flat cord with 3-pin connectors (2)

SECTION 1
SERVICING NOTES

MODEL IDENTIFICATION

—Specification Label—

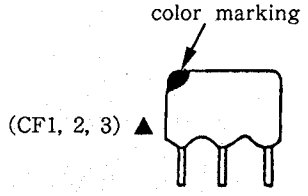


SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

Note on Ceramic Filter (CF1, 2, 3) ▲ Replacement.

This set employs three ceramic filters (CF1, 2, 3) ▲ which should have the same color marking to identify their center frequency. Therefore FM IF offset adjustment by ＊ D613, ＊ D614 is necessary to match the center frequency of the ceramic filters used with FM intermediate frequency.



○ : Mounted
× : not Mounted

Ceramic filter		Mount		FM intermediate frequency (MHz)
Color mark	Center frequency (MHz)	＊ D613	＊ D614	
White	10.750	×	○	10.750
Red	10.700	×	×	10.700
Black	10.650	○	×	10.650

FM intermediate frequency is determined by the three types as shown above, Ceramic filters of same center frequency, i. e., of same color coding should be used for CF1, CF2 and CF3.

When replacing the ceramic filters, perform the FM Discriminator Adjustment.

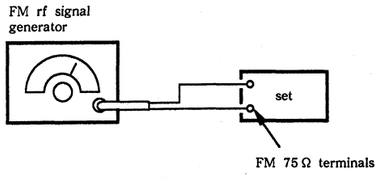
▲ : AEP, UK Model : CF1, 2
WG, IT Model : CF1, 2, 3

SECTION 2
ELECTRICAL ADJUSTMENTS

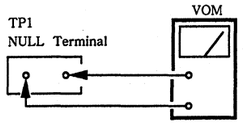
FM SECTION

FM DISCRIMINATOR ADJUSTMENT

Setting :



Carrier frequency : 98MHz
Modulation : 1kHz, 40kHz deviation (100%)
Output level : 1mV (60dB)



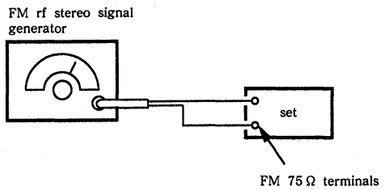
Procedure :

1. Tune the set to 98MHz.
2. Adjust T21 for 0V reading on the VOM.

Note : FM tuning level adjustment should be made after FM discriminator alignment.

FM TUNING LEVEL ADJUSTMENT

Setting :



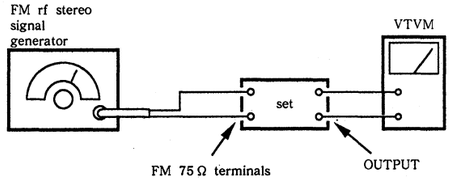
Carrier frequency : 98MHz
Modulation : 1kHz, 40kHz deviation (100%)
Output level : 17.8 μV (25dB)

Procedure :

1. Tune the set to 98MHz.
2. Adjust RV24 so that the TUNED LED goes on.

FM STEREO SEPARATION ADJUSTMENT

Procedure :



Carrier frequency : 98MHz
Output level : 1mV (60dB)
Modulation
Audio 400Hz : 16.25kHz deviation
Sub channel 38kHz : 16.25kHz deviation
Pilot signal 19kHz : 7.5kHz deviation

FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV21 for minimum reading
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV21 for minimum reading

L-CH Stereo separation : Ⓐ − Ⓑ
R-CH Stereo separation : Ⓒ − Ⓓ

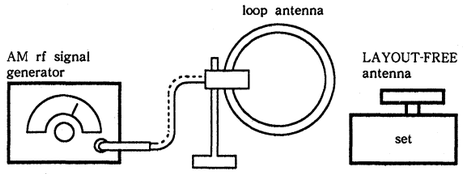
The separations of both channels should be equal.

MW/LW SECTION

AM TUNING LEVEL ADJUSTMENT

BAND select switch : LW

Setting :

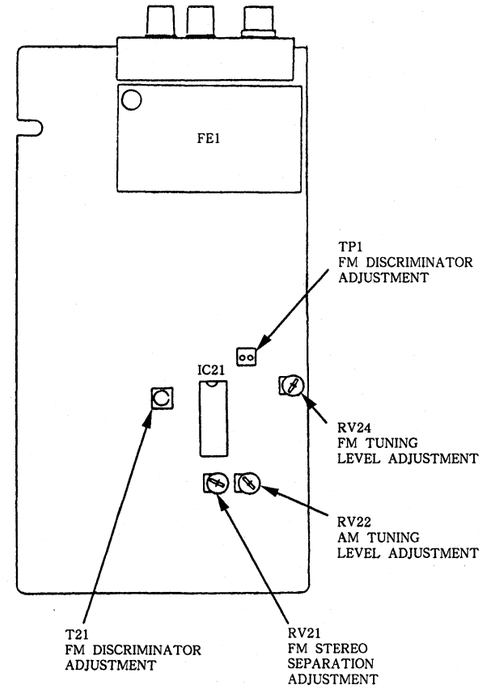


Carrier frequency : 216kHz
Modulation : 400Hz, 30% modulation

Procedure :

1. Set loop antenna so that the LAYOUT-FREE antenna input level becomes 2.5mV/m (68dB).
2. Tune the set to 216kHz.
3. Adjust the RV22 so that the TUNED LED goes on.

Adjustment Location :
−tuner board−

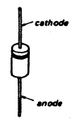


SECTION 3
DIAGRAMS

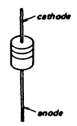
3-1. SEMICONDUCTOR LEAD LAYOUTS

DTC114ES
2SA1317
2SA1348
2SC2669
2SC3330S
2SC3330T

US1060M
10E2N
UZL-2M



UZL-6L2
HZS-6A1L

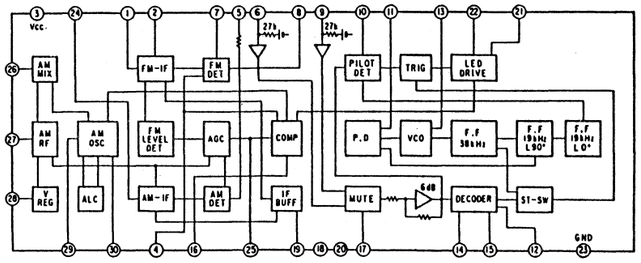


2SC3112A

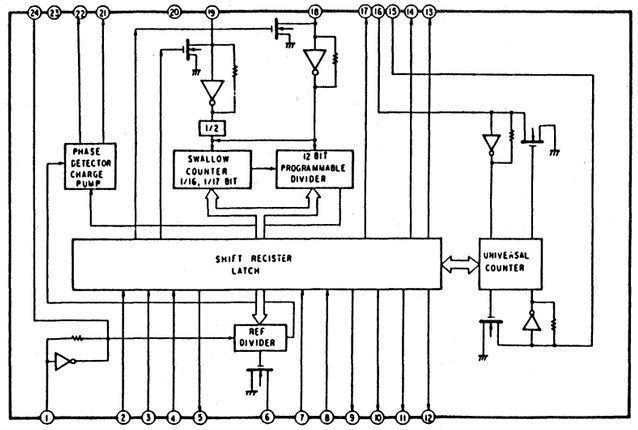
2SK246GR3

3-2. IC BLOCK DIAGRAMS

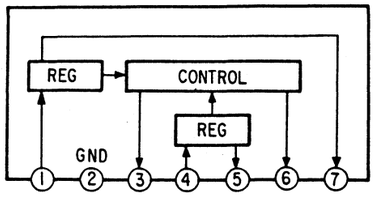
IC21 LA1851N



IC81 LC7218



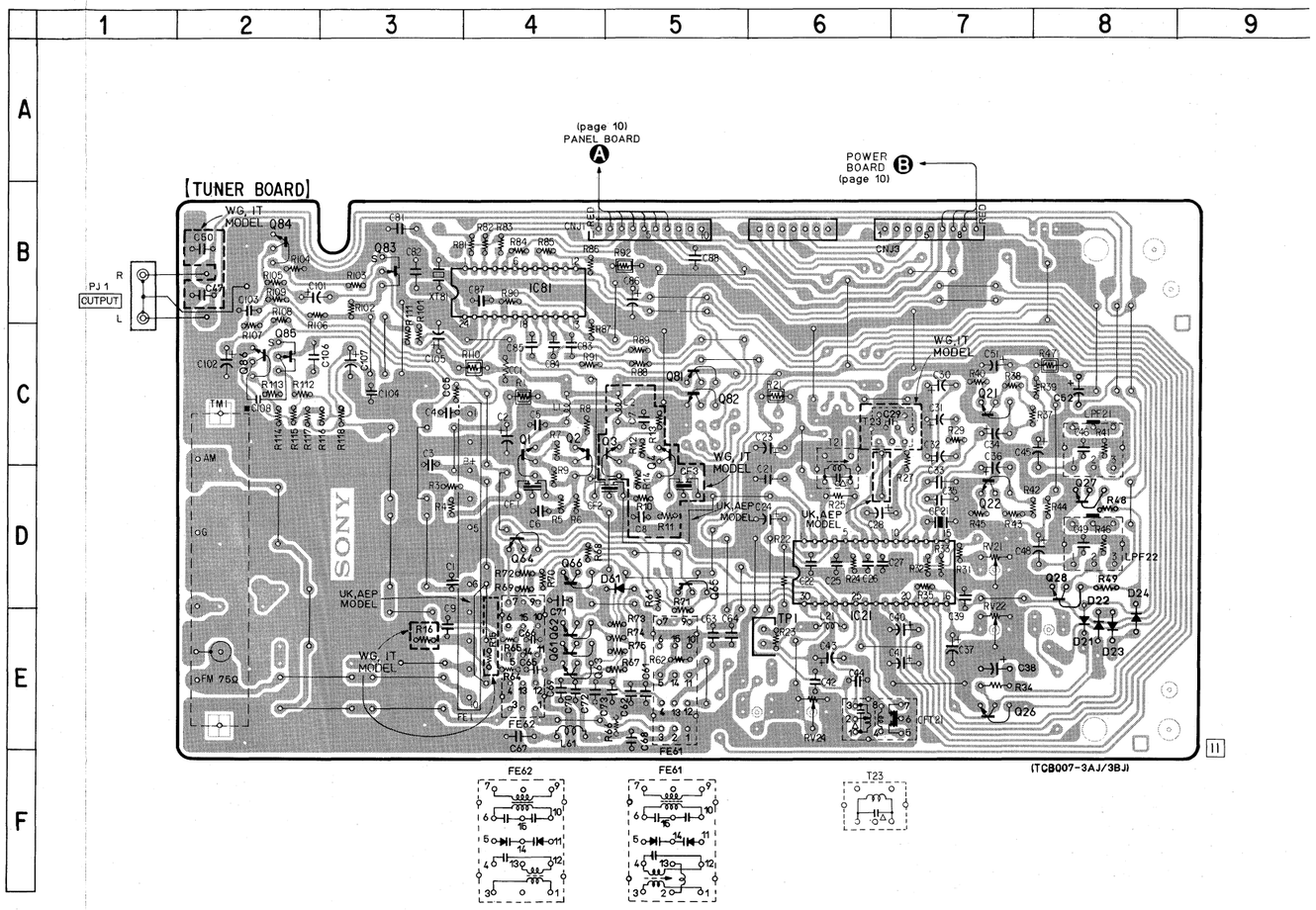
IC701 LA5667



3-3. TUNER SECTION PRINTED WIRING BOARD

• **Semiconductor Location**

Ref. No.	Location
IC21	D-6
IC81	B-4
Q1	C-4
Q2	C-4
Q3	C-5
Q4	C-5
Q21	C-7
Q22	D-7
Q26	E-7
Q27	D-8
Q28	D-8
Q61	E-4
Q62	E-4
Q63	E-4
Q64	D-4
Q65	D-5
Q66	D-4
Q81	C-5
Q82	C-5
Q83	B-3
Q84	B-2
Q85	C-2
Q86	C-2
D21	E-8
D22	E-8
D23	E-8
D24	E-8
D61	D-5



Note on Printed Wiring Boards

- o— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- [ ]← indicates side identified with part number.
- WG : West Germany model
- IT : Italian model

Note on Schematic Diagram

- *D613, *D614 : See page 2 for Note on Ceramic Filter (CF1, 2, 3) ▲ Replacement.
- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.
- B+ : B+ Line
- B− : B− Line
- : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : AM
  〈 〉 : LW
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
- WG : West Germany model
- IT : Italian model

3-4. TUNER SECTION SCHEMATIC DIAGRAM

【TUNER BOARD】

FE1 FM FRONT-END
FM : 1.9 - 7.6V
ANT IN · GND · AGC · GND · VT · GND · IF OUT · B+ · GND · F OUT

Q1 2SC2669 Q2 2SC2669) FM IF AMP
Q3 2SC2669 Q4 2SC2669) FM IF AMP

AEP, UK MODEL
WG, IT MODEL

TM1
FM 75Ω COAXIAL
ANTENNA
G
AM

AEP,UK:11.4
WG,IT:3.6

AEP,UK:47
WG,IT:22

WG,IT MODEL
AEP,UK MODEL

AEP, UK MODEL

AEP,UK:22K
WG,IT:47K

RV24 FM TUNING

RV22 AM TUNING

IC21
LA1858N
FM DET, MPX
AM IF, DET

LPF21, 22

Q21 2SC3330) PRE AMP
Q22 2SC3330)

Q27, 28 2SC3330 MUTE

WG, IT MODEL

AEP, UK MODEL

TP1 (NULL)

WG, IT MODEL

Q26 2SC3402 MUTE

D21-24 US1060M

RV21 STEREO SEPARATION
AEP,UK:2.2K
WG, IT :4.7K

* C27
AEP,UK:100P
WG,IT:680P

Q81, 82 FM B+ SWITCH

Q81 2SA1348

Q83 2SK246 GR3) LPF
Q84 2SC3112A)
Q85 2SK246 GR3) LPF
Q86 2SC3112A)

IC81
LC7218
PLL

IC81 LC7218

XT81 7.2MHz

1.25Vp-p
139nSec

LW BLOCK
MW BLOCK

Q64 2SC3330 LW SWITCH
Q63 2SC3402 LW SWITCH
Q65 2SA1317 MW SWITCH
Q66 2SC3402 BAND SWITCH
Q62 2SC3402 MW SWITCH
Q61 2SC3402 MW SWITCH

LW:1.7 - 6V
MW :1.3 - 7.8V

PJ1 OUTPUT R L

CNJ1
CE (PLL) · DI (PLL) · CL (PLL) · DO (PLL) · GND · TUNED · STEREO

PANEL BOARD (A) (page 11)

CNJ3
5V · 13V · GND · MUTE

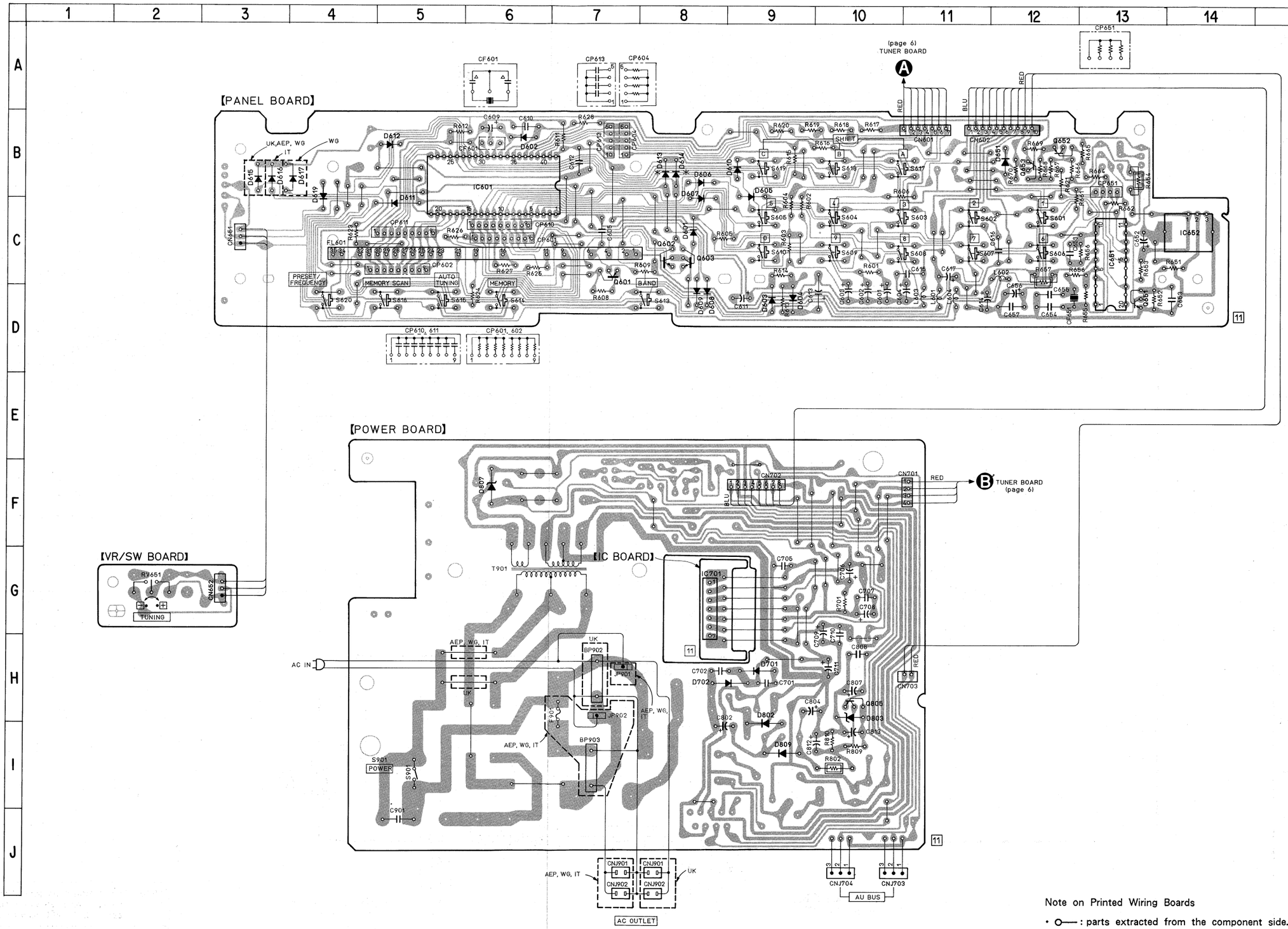
(B) POWER BOARD (page 11)

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

3-5. CONTROL AND POWER SUPPLY SECTION PRINTED WIRING BOARDS

• **Semiconductor Locatio**

Ref. No.	Location
IC601	B–6
IC651	C–13
IC652	C–14
IC701	F–9
Q601	C–7
Q602	C–8
Q603	C–8
Q651	D–13
Q652	B–13
Q653	B–12
Q805	H–10
D601	C–8
D602	B–6
D603	D–9
D604	D–9
D605	B–9
D606	B–8
D607	B–8
D608	D–8
D609	D–8
D610	B–9
D611	C–5
D612	B–5
D613	B–8
D614	B–8
D615	B–3
D616	B–4
D617	B–4
D619	B–4
D651	B–12
D701	H–9
D702	H–9
D802	I–9
D803	H–10
D807	F–6
D809	I–9



Note on Printed Wiring Boards

- ○— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ⊡← indicates side identified with part number.
- WG : West Germany model
- IT : Italian model

3-6. CONTROL AND POWER SUPPLY SECTION SCHEMATIC DIAGRAM

• See page 6 for notes.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

【PANEL BOARD】

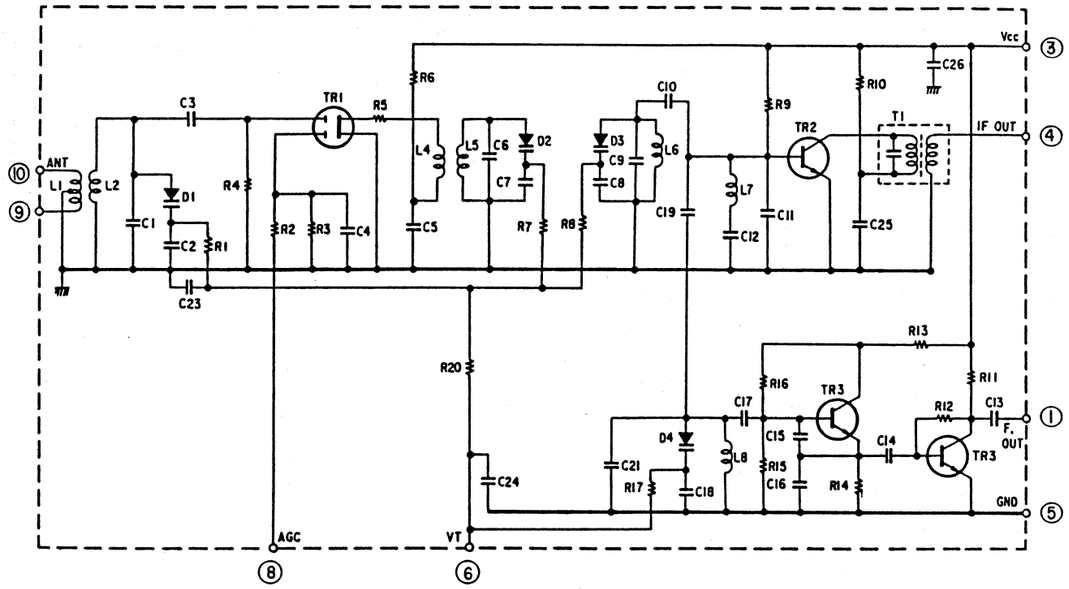
【POWER BOARD】

【IC BOARD】 IC701 LC5667 POWER CONTROL

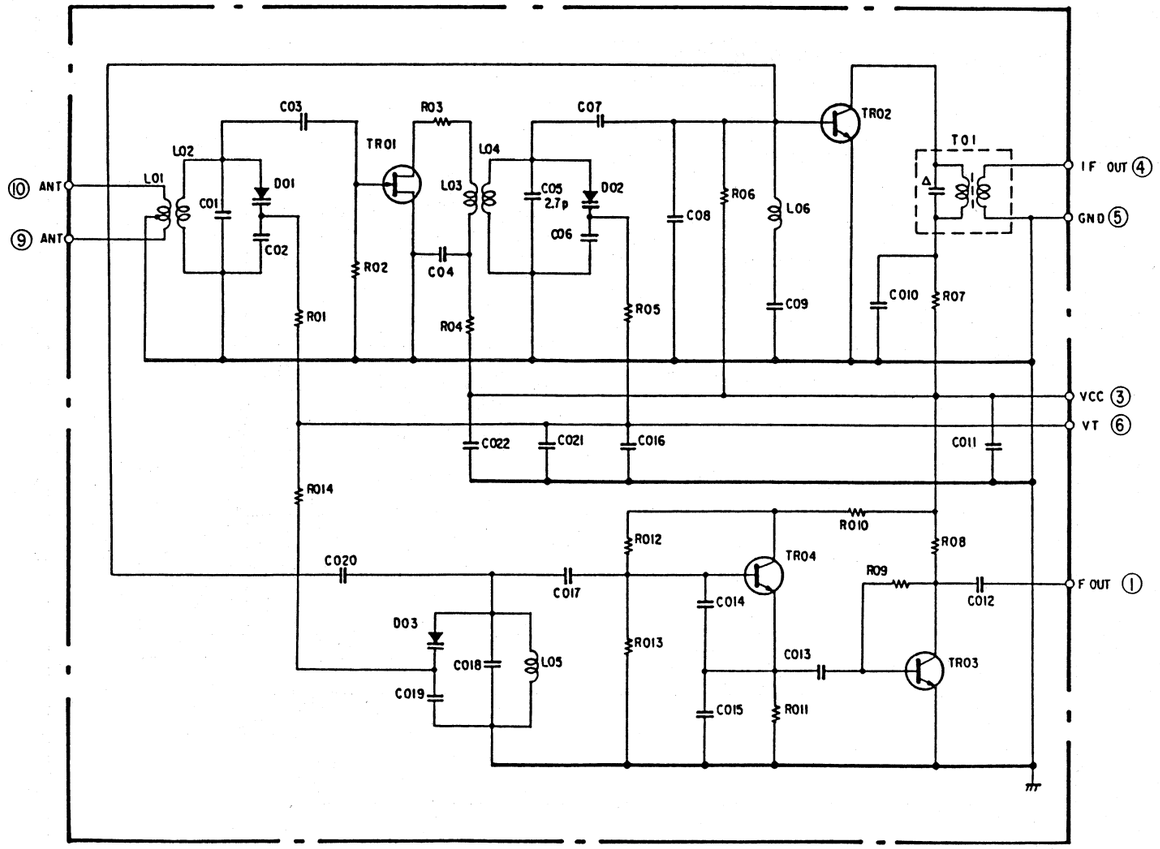
【VR/SW BOARD】

3-7. FM FRONT-END SCHEMATIC DIAGRAMS

FE1 (West Germany, Italian Model)



FE1 (AEP, UK Model)

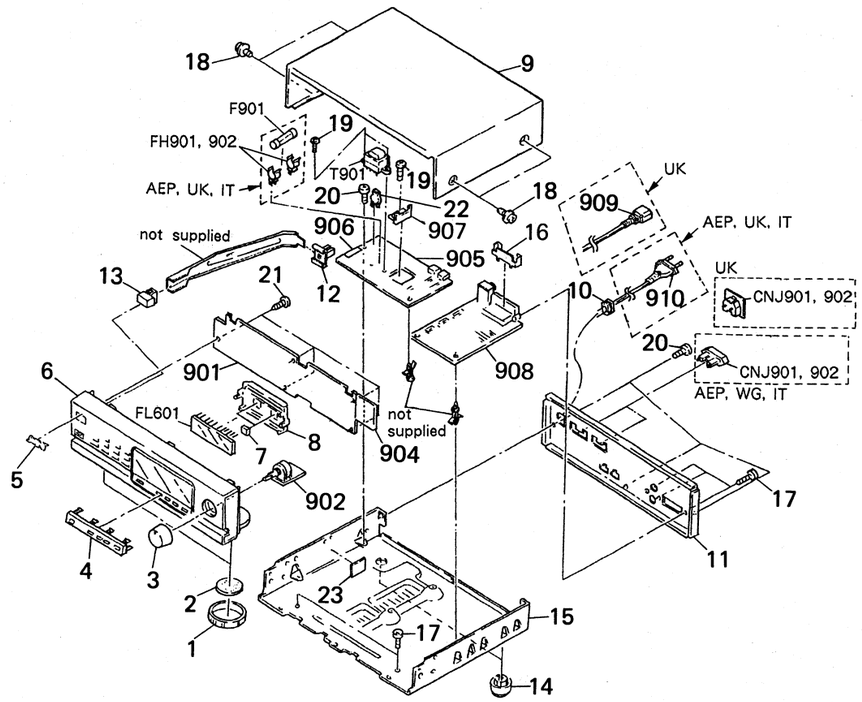


SECTION 4
EXPLODED VIEW

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ Cabinet's Color ↑ Parts Color
- WG: West Germany model
- IT : Italian model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.



No.	Part No.	Description	Remarks
1	X-4917-252-1	PLATE (LEG) ASSY, ORNAMENTAL	2
2	4-928-401-01	FELT	
3	4-925-170-01	KNOB (VOL)	
4	4-925-176-11	PLATE, ORNAMENTAL	
5	4-925-161-21	EMBLEM (4-A), SONY	
6	X-4917-270-1	PANEL (L) ASSY, FRONT	
7	*4-921-941-21	CUSHION (FL)	
8	*4-923-103-01	HOLDER, FL TUBE	
9	4-919-389-12	CASE	
10	*3-703-244-00	BUSHING (2104), CORD	
11	*4-928-480-11	(AEP,IT)...PANEL, BACK	
	*4-928-480-21	(UK).....PANEL, BACK	
	*4-928-480-41	(WG).....PANEL, BACK	
12	4-866-342-00	JOINT (B), KNOB	
13	4-921-919-01	BUTTON (P)	
14	X-4917-254-1	FOOT ASSY	
15	*4-924-520-01	CHASSIS	
16	*4-924-988-11	PLATE (ST), GROUND	
17	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
18	3-704-366-01	SCREW (CASE) (M3X8)	
19	7-682-549-04	SCREW +BVTT 3X10 (S)	
20	7-682-547-04	SCREW +BVTT 3X6 (S)	
21	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S	
22	*4-875-455-31	COVER (DIA. 20), CAPACITOR (C901)	
23	9-911-841-XX	CUSHION	

No.	Part No.	Description	Remarks
901	*A-4333-390-A	(AEP,UK)...MOUNTED PCB, PANEL	902,904
	*A-4333-392-A	(WG).....MOUNTED PCB, PANEL	902,904
	*A-4333-393-A	(IT).....MOUNTED PCB, PANEL	902,904
902	*1-631-098-11	PC BOARD, VR/SW	
904	*1-631-097-11	PC BOARD, TUNING	
905	*1-631-100-11	PC BOARD, POWER	
906	*1-631-102-11	PC BOARD, CONNECTOR	
907	*1-631-101-11	PC BOARD, IC	
908	*A-4303-208-A	(AEP,UK)...MOUNTED PCB, TUNER(TCB007-3AJ)	
	*A-4303-209-A	(WG,IT)....MOUNTED PCB, TUNER(TCB007-3BJ)	
909	⚠1-556-562-00	(UK).....CORD, POWER	
910	⚠1-555-750-00	(AEP,WG,IT)...CORD, POWER	
CNJ901	⚠1-526-751-00	(UK).....OUTLET, AC	
CNJ901	⚠1-526-794-11	(AEP,WG,IT)...OUTLET, AC	
CNJ902	⚠1-526-751-00	(UK).....OUTLET, AC	
CNJ902	⚠1-526-794-11	(AEP,WG,IT)...OUTLET, AC	
F901	⚠1-532-203-00	(AEP,WG,IT)...FUSE, TIME-LAG 2A	
FH901	1-533-183-11	(AEP,WG,IT)...HOLDER, FUSE	
FH902	1-533-183-11	(AEP,WG,IT)...HOLDER, FUSE	
FL601	1-519-512-11	INDICATOR TUBE, FLUORESCENT	
T901	⚠1-449-196-11	TRANSFORMER, POWER	

SECTION 5
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA...,
UPC...: μPC, UPD...: μPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- WG: West Germany model
- IT : Italian model

Ref.No.	Part No.	Description
901	*A-4333-390-A	(AEP,UK)...MOUNTED PCB, PANEL 902,904
	*A-4333-392-A	(WG).....MOUNTED PCB, PANEL 902,904
	*A-4333-393-A	(IT).....MOUNTED PCB, PANEL 902,904
902	*1-631-098-11	PC BOARD, VR/SW
904	*1-631-097-11	PC BOARD, TUNING
905	*1-631-100-11	PC BOARD, POWER
906	*1-631-102-11	PC BOARD, CONNECTOR
907	*1-631-101-11	PC BOARD, IC
908	*A-4303-208-A	(AEP,UK)..MOUNTED PCB, TUNER(TCB007-3AJ)
	*A-4303-209-A	(WG,IT)...MOUNTED PCB, TUNER(TCB007-3BJ)
909	⚠1-556-562-00	(UK).....CORD, POWER
910	⚠1-555-750-00	(AEP,WG,IT)...CORD, POWER
BP902	*1-535-139-00	(UK)....BASE POST 22MM (10MM PITCH) 2P
BP903	*1-535-139-00	(AEP,WG,IT) ...BASE POST 22MM (10MM PITCH) 2P
C1	1-162-294-31	CERAMIC CHIP 0.001MF 20% 25V
C2	1-124-477-11	ELECT 47MF 20% 16V
C3	1-163-059-00	CERAMIC MELF 0.01MF 20% 16V
C4	1-162-294-31	CERAMIC CHIP 0.001MF 20% 25V
C5	1-163-059-00	CERAMIC MELF 0.01MF 20% 16V
C6	1-163-059-00	CERAMIC MELF 0.01MF 20% 16V
C7	1-163-059-00	(WG,IT)...CERAMIC MELF 0.01MF 20% 16V
C8	1-163-059-00	(WG,IT)...CERAMIC MELF 0.01MF 20% 16V
C9	1-163-059-00	CERAMIC MELF 0.01MF 20% 16V
C21	1-101-006-00	CERAMIC 0.047MF 20% 50V
C22	1-163-059-00	CERAMIC MELF 0.01MF 20% 16V
C23	1-124-477-11	ELECT 47MF 20% 16V
C24	1-123-382-00	ELECT 3.3MF 20% 50V
C25	1-163-063-00	CERAMIC MELF 0.022MF 25V
C26	1-163-019-00	CERAMIC CHIP 0.0068MF 20% 12V
C27	1-162-516-11	(AEP,UK)...CERAMIC CHIP 100PF 10% 50V
C27	1-162-521-11	(WG,IT)....CERAMIC CHIP 680PF 20% 50V
C28	1-124-499-11	ELECT 1.0MF 20% 50V
C29	1-162-516-11	(WG,IT)....CERAMIC CHIP 100PF 10% 50V
C30	1-124-499-11	ELECT 1.0MF 20% 50V
C31	1-124-902-00	ELECT 0.47MF 20% 50V
C32	1-124-463-00	ELECT 0.1MF 20% 50V
C33	1-130-481-00	PE TEREPHTHALATE 0.0068MF 5% 50V
C34	1-123-382-00	ELECT 3.3MF 20% 50V
C35	1-130-481-00	PE TEREPHTHALATE 0.0068MF 5% 50V
C36	1-123-382-00	ELECT 3.3MF 20% 50V
C37	1-123-875-11	ELECT 10MF 20% 50V
C38	1-123-875-11	ELECT 10MF 20% 50V
C39	1-163-059-00	CERAMIC MELF 0.01MF 20% 16V

Ref.No.	Part No.	Description
C40	1-124-463-00	ELECT 0.1MF 20% 50V
C41	1-124-927-11	ELECT 4.7MF 20% 50V
C42	1-163-059-00	CERAMIC MELF 0.01MF 20% 16V
C43	1-126-176-11	ELECT 220MF 20% 10V
C44	1-163-059-00	CERAMIC MELF 0.01MF 20% 16V
C45	1-123-382-00	ELECT 3.3MF 20% 50V
C46	1-161-375-00	CERAMIC CHIP 0.0022MF 20% 25V
C47	1-162-294-31	(WG,IT)....CERAMIC CHIP 0.001MF 20% 50V
C48	1-123-382-00	ELECT 3.3MF 20% 50V
C49	1-161-375-00	CERAMIC CHIP 0.0022MF 20% 25V
C50	1-162-294-31	(WG,IT)....CERAMIC CHIP 0.001MF 20% 50V
C51	1-124-477-11	ELECT 47MF 20% 16V
C52	1-124-252-00	ELECT 0.33MF 20% 50V
C61	1-163-063-00	CERAMIC MELF 0.022MF 25V
C62	1-163-063-00	CERAMIC MELF 0.022MF 25V
C63	1-163-063-00	CERAMIC MELF 0.022MF 25V
C64	1-163-063-00	CERAMIC MELF 0.022MF 25V
C65	1-163-063-00	CERAMIC MELF 0.022MF 25V
C66	1-163-063-00	CERAMIC MELF 0.022MF 25V
C67	1-102-120-00	CERAMIC 0.0018MF 10% 50V
C68	1-163-011-11	CERAMIC CHIP 0.0015MF 20% 25V
C69	1-163-063-00	CERAMIC MELF 0.022MF 25V
C70	1-163-063-00	CERAMIC MELF 0.022MF 25V
C71	1-163-063-00	CERAMIC MELF 0.022MF 25V
C72	1-163-063-00	CERAMIC MELF 0.022MF 25V
C73	1-163-063-00	CERAMIC MELF 0.022MF 25V
C81	1-102-961-00	CERAMIC 27PF 5% 50V
C82	1-102-961-00	CERAMIC 27PF 5% 50V
C83	1-163-059-00	CERAMIC MELF 0.01MF 20% 16V
C84	1-163-059-00	CERAMIC MELF 0.01MF 20% 16V
C85	1-163-059-00	CERAMIC MELF 0.01MF 20% 16V
C86	1-124-477-11	ELECT 47MF 20% 16V
C87	1-163-059-00	CERAMIC MELF 0.01MF 20% 16V
C88	1-163-059-00	CERAMIC MELF 0.01MF 20% 16V
C101	1-124-925-11	ELECT 2.2MF 20% 50V
C102	1-124-463-00	ELECT 0.1MF 20% 50V
C103	1-163-059-00	CERAMIC MELF 0.01MF 20% 16V
C104	1-163-059-00	CERAMIC MELF 0.01MF 20% 16V
C105	1-124-477-11	ELECT 47MF 20% 16V
C106	1-136-173-00	METALIZED FILM 0.47MF 5% 50V
C107	1-124-463-00	ELECT 0.1MF 20% 50V
C108	1-101-005-00	CERAMIC 0.022MF 50V
C601	1-126-157-11	ELECT 10MF 20% 16V
C602	1-124-463-00	ELECT 0.1MF 20% 50V
C603	1-124-463-00	ELECT 0.1MF 20% 50V

Ref.No.	Part No.	Description			
C604	1-124-463-00	ELECT	0.1MF	20%	50V
C605	1-162-286-31	CERAMIC	220PF	10%	50V
C609	1-126-094-11	ELECT	4.7MF	20%	35V
C610	1-161-379-00	CERAMIC	0.01MF	30%	16V
C611	1-126-157-11	ELECT	10MF	20%	16V
C612	1-161-379-00	CERAMIC	0.01MF	30%	16V
C613	1-125-486-11	DOUBLE LAYERS	0.22F		5.5V
C614	1-124-589-11	ELECT	47MF	20%	10V
C615	1-164-097-11	CERAMIC	0.022MF		50V
C616	1-164-097-11	CERAMIC	0.022MF		50V
C617	1-123-357-00	ELECT	22MF	20%	35V
C652	1-124-589-11	ELECT	47MF	20%	10V
C653	1-162-282-31	CERAMIC	100PF	10%	50V
C654	1-162-211-31	CERAMIC	33PF	5%	50V
C655	1-162-211-31	CERAMIC	33PF	5%	50V
C656	1-126-154-11	ELECT	47MF	20%	6.3V
C657	1-161-379-00	CERAMIC	0.01MF	30%	16V
C658	1-162-282-31	CERAMIC	100PF	10%	50V
C701	1-101-004-00	CERAMIC	0.01MF		50V
C702	1-101-004-00	CERAMIC	0.01MF		50V
C705	1-101-005-00	CERAMIC	0.022MF		50V
C706	1-124-927-11	ELECT	4.7MF	20%	50V
C707	1-101-005-00	CERAMIC	0.022MF		50V
C708	1-124-910-11	ELECT	47MF	20%	50V
C709	1-124-910-11	ELECT	47MF	20%	50V
C710	1-101-005-00	CERAMIC	0.022MF		50V
C711	1-126-105-11	ELECT	1000MF	20%	35V
C802	1-124-572-11	ELECT	100MF	20%	63V
C804	1-124-572-11	ELECT	100MF	20%	63V
C807	1-124-910-11	ELECT	47MF	20%	35V
C808	1-101-004-00	CERAMIC	0.01MF		50V
C812	1-124-261-00	ELECT	10MF	20%	50V
C813	1-124-261-00	ELECT	10MF	20%	50V
C901 ⚠	1-161-744-00	CERAMIC	0.01MF		400V
CC1	1-249-366-11	CARBON MELF	0	5%	1/5W
CC5	1-249-997-11	CARBON MELF	0	5%	1/8W
CF1	1-567-389-11	FILTER, CERAMIC (10.7MHz)			
CF2	1-567-389-11	FILTER, CERAMIC (10.7MHz)			
CF3	1-567-389-11	(WG,IT)...FILTER, CERAMIC (10.7MHz)			
CF21	1-577-075-11	OSCILLATOR, CERAMIC (456kHz)			
CF601	1-577-358-21	VIBRATOR, CERAMIC (4MHz)			
CF651	1-567-839-11	VIBRATOR, CERAMIC (3MHz)			
CFT21	1-404-853-11	TRANSFORMER, IF (CERAMIC FILTER)			
CN601	1-568-282-11	SOCKET, CONNECTOR 7P			
CN602	1-568-285-11	SOCKET, CONNECTOR 10P			
CN651	1-568-269-11	SOCKET, CONNECTOR 3P			
CN652	1-568-278-11	SOCKET, CONNECTOR 3P			
CN701	*1-568-308-11	SOCKET, CONNECTOR 4P			
CN702	*1-568-312-21	SOCKET, CONNECTOR 8P			
CN703	*1-568-268-11	SOCKET, CONNECTOR 2P			
CNJ1	*1-568-276-11	SOCKET, CONNECTOR 10P			
CNJ3	*1-568-275-11	SOCKET, CONNECTOR 9P			
CNJ703	*1-565-561-11	PIN, CONNECTOR 3P (AU BUS)			
CNJ704	*1-565-561-11	PIN, CONNECTOR 3P (AU BUS)			
CNJ901⚠	1-526-751-00	(UK).....OUTLET, AC			
CNJ901⚠	1-526-794-11	(AEP,WG,IT)...OUTLET, AC			

Ref.No.	Part No.	Description
CNJ902⚠	1-526-751-00	(UK).....OUTLET, AC
CNJ902⚠	1-526-794-11	(AEP,WG,IT)...OUTLET, AC
CP601	1-233-138-11	COMPOSITION CIRCUIT BLOCK
CP602	1-233-138-11	COMPOSITION CIRCUIT BLOCK
CP604	1-232-986-11	COMPOSITION CIRCUIT BLOCK
CP610	1-233-151-11	COMPOSITION CIRCUIT BLOCK
CP611	1-233-151-11	COMPOSITION CIRCUIT BLOCK
CP613	1-233-150-11	COMPOSITION CIRCUIT BLOCK
CP651	1-232-995-11	COMPOSITION CIRCUIT BLOCK
D21	8-719-000-26	DIODE US1060M
D22	8-719-000-26	DIODE US1060M
D23	8-719-000-26	DIODE US1060M
D24	8-719-000-26	DIODE US1060M
D61	8-719-000-26	DIODE US1060M
D601	8-719-000-26	DIODE US1060M
D602	8-719-000-26	DIODE US1060M
D603	8-719-000-26	DIODE US1060M
D604	8-719-000-26	DIODE US1060M
D605	8-719-000-26	DIODE US1060M
D606	8-719-000-26	DIODE US1060M
D607	8-719-000-26	DIODE US1060M
D608	8-719-000-26	DIODE US1060M
D609	8-719-000-26	DIODE US1060M
D610	8-719-000-26	DIODE US1060M
D611	8-719-000-26	DIODE US1060M
D612	8-719-000-26	DIODE US1060M
D613	8-719-000-26	DIODE US1060M
D614	8-719-000-26	DIODE US1060M
D615	8-719-000-26	(AEP,UK,WG)...DIODE US1060M
D616	8-719-000-26	(IT).....DIODE US1060M
D617	8-719-000-26	(WG).....DIODE US1060M
D619	8-719-000-26	DIODE US1060M
D651	8-719-000-26	DIODE US1060M
D701	8-719-200-77	DIODE 10E2N
D702	8-719-200-77	DIODE 10E2N
D802	8-719-200-77	DIODE 10E2N
D803	8-719-002-45	DIODE UZL-27M
D807	8-719-000-51	(AEP,WG,IT)...DIODE UZL-6L2
D807	8-719-933-33	(UK).....DIODE HZS6A1L
D809	8-719-200-77	DIODE 10E2N
F901 ⚠	1-532-203-00	(AEP,WG,IT)...FUSE, TIME-LAG 2A
FE1	1-463-857-11	(WG,IT)....FRONT END, FM
FE1	1-463-862-21	(AEP,UK)...FRONT END, FM
FE61	1-236-462-11	ENCAPSULATED COMPONENT
FE62	1-236-463-11	ENCAPSULATED COMPONENT
FH901	1-533-183-11	(AEP,WG,IT)...HOLDER, FUSE
FH902	1-533-183-11	(AEP,WG,IT)...HOLDER, FUSE
FL601	1-519-512-11	INDICATOR TUBE, FLUORESCENT
IC21	8-759-821-45	IC LA1851N
IC81	8-759-820-91	IC LC7218
IC601	8-759-234-25	IC TMP47C441AN-1672
IC651	8-759-632-31	IC M50721-127P
IC652	8-741-161-00	IC SBX1610-51
IC701	8-759-820-09	IC LA5667

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description
JP901	1-535-416-00	(AEP,WG,IT)...TERMINAL
JP902	1-535-416-00	(AEP,WG,IT)...TERMINAL
L1	1-410-645-31	MICRO INDUCTOR (100UH)
L2	1-410-645-31	(WG,IT)...MICRO INDUCTOR (100UH)
L21	1-407-500-00	MICRO INDUCTOR (4.7MMH)
L61	1-410-525-11	MICRO INDUCTOR (220UH)
L601	1-408-521-11	INDUCTOR 100UH
L602	1-408-421-00	INDUCTOR 100UH
L603	1-408-421-00	INDUCTOR 100UH
L604	1-408-421-00	INDUCTOR 100UH
LPF21	1-235-164-00	FILTER, LOW PASS
LPF22	1-235-164-00	FILTER, LOW PASS
PJ1	1-565-352-21	JACK, PIN 2P (OUT PUT)
Q1	8-729-266-93	TRANSISTOR 2SC2669
Q2	8-729-266-93	TRANSISTOR 2SC2669
Q3	8-729-266-93	(WG,IT)...TRANSISTOR 2SC2669
Q4	8-729-266-93	(WG,IT)...TRANSISTOR 2SC2669
Q21	8-729-820-23	TRANSISTOR 2SC3330S
Q22	8-729-820-23	TRANSISTOR 2SC3330S
Q26	8-729-900-80	TRANSISTOR DTC114ES
Q27	8-729-820-23	TRANSISTOR 2SC3330S
Q28	8-729-820-23	TRANSISTOR 2SC3330S
Q61	8-729-900-80	TRANSISTOR DTC114ES
Q62	8-729-900-80	TRANSISTOR DTC114ES
Q63	8-729-900-80	TRANSISTOR DTC114ES
Q64	8-729-820-23	TRANSISTOR 2SC3330S
Q65	8-729-820-16	TRANSISTOR 2SA1317S
Q66	8-729-900-80	TRANSISTOR DTC114ES
Q81	8-729-806-10	TRANSISTOR 2SA1348
Q82	8-729-900-80	TRANSISTOR DTC114ES
Q83	8-729-202-67	TRANSISTOR 2SK246GR3
Q84	8-729-201-84	TRANSISTOR 2SC3112-A
Q85	8-729-202-67	TRANSISTOR 2SK246GR3
Q86	8-729-201-84	TRANSISTOR 2SC3112-A
Q601	8-729-806-10	TRANSISTOR 2SA1348
Q602	8-729-900-80	TRANSISTOR DTC114ES
Q603	8-729-900-80	TRANSISTOR DTC114ES
Q651	8-729-820-24	TRANSISTOR 2SC3330T
Q652	8-729-820-24	TRANSISTOR 2SC3330T
Q653	8-729-820-24	TRANSISTOR 2SC3330T
Q805	8-729-821-04	TRANSISTOR 2SA1317-STU
R1	⚠1-249-397-11	(WG,IT)....CARBON (SMALL)22 5% 1/4W F
R1	⚠1-249-401-11	(AEP,UK)...CARBON (SMALL)47 5% 1/4W F
R3	1-249-329-11	CARBON MELF 330 5% 1/8W
R4	1-249-329-11	CARBON MELF 330 5% 1/8W
R5	1-249-329-11	CARBON MELF 330 5% 1/8W
R6	1-249-350-11	CARBON MELF 18K 5% 1/8W
R7	1-249-329-11	CARBON MELF 330 5% 1/8W
R8	1-249-332-11	CARBON MELF 560 5% 1/8W
R9	1-249-352-11	CARBON MELF 27K 5% 1/8W
R10	1-249-329-11	(WG,IT)...CARBON MELF 330 5% 1/8W
R11	1-249-350-11	(WG,IT)...CARBON MELF 18K 5% 1/8W
R12	1-249-329-11	(WG,IT)...CARBON MELF 330 5% 1/8W
R13	1-249-334-11	(WG,IT)...CARBON MELF 820 5% 1/8W
R14	1-249-352-11	(WG,IT)...CARBON MELF 27K 5% 1/8W
R15	1-249-347-11	(WG,IT)...CARBON MELF 10K 5% 1/8W
R16	1-249-343-11	(WG,IT)...CARBON MELF 4.7K 5% 1/8W
R21	⚠1-249-404-00	CARBON (SMALL) 82 5% 1/4W F

Ref.No.	Part No.	Description
R22	1-249-433-11	CARBON (SMALL) 22K 5% 1/4W
R23	1-249-335-11	CARBON MELF 1K 5% 1/8W
R24	1-249-353-11	CARBON MELF 33K 5% 1/8W
R25	1-249-428-11	CARBON (SMALL) 8.2K 5% 1/4W
R27	1-249-350-11	CARBON MELF 18K 5% 1/8W
R29	1-249-347-11	CARBON MELF 10K 5% 1/8W
R31	1-249-331-11	CARBON MELF 470 5% 1/8W
R32	1-249-347-11	CARBON MELF 10K 5% 1/8W
R33	1-249-347-11	CARBON MELF 10K 5% 1/8W
R34	1-249-425-11	CARBON (SMALL) 4.7K 5% 1/4W
R35	1-249-355-11	CARBON MELF 47K 5% 1/8W
R37	1-249-359-11	CARBON MELF 100K 5% 1/8W
R38	1-249-363-11	CARBON MELF 220K 5% 1/8W
R39	1-249-339-11	CARBON MELF 2.2K 5% 1/8W
R40	1-249-338-11	CARBON MELF 1.8K 5% 1/8W
R41	1-249-344-11	CARBON MELF 5.6K 5% 1/8W
R42	1-249-359-11	CARBON MELF 100K 5% 1/8W
R43	1-249-363-11	CARBON MELF 220K 5% 1/8W
R44	1-249-339-11	CARBON MELF 2.2K 5% 1/8W
R45	1-249-338-11	CARBON MELF 1.8K 5% 1/8W
R46	1-249-344-11	CARBON MELF 5.6K 5% 1/8W
R47	⚠1-249-409-11	CARBON (SMALL)220 5% 1/4W F
R48	1-249-359-11	CARBON MELF 100K 5% 1/8W
R49	1-249-359-11	CARBON MELF 100K 5% 1/8W
R61	1-249-359-11	CARBON MELF 100K 5% 1/8W
R62	1-249-355-11	CARBON MELF 47K 5% 1/8W
R64	1-249-351-11	CARBON MELF 22K 5% 1/8W
R65	1-249-355-11	CARBON MELF 47K 5% 1/8W
R66	1-215-493-00	CARBON MELF 1M 5% 1/5W
R67	1-249-359-11	CARBON MELF 100K 5% 1/8W
R68	1-249-352-11	CARBON MELF 27K 5% 1/8W
R69	1-249-351-11	CARBON MELF 22K 5% 1/8W
R70	1-249-331-11	CARBON MELF 470 5% 1/8W
R71	1-249-339-11	CARBON MELF 2.2K 5% 1/8W
R72	1-249-351-11	CARBON MELF 22K 5% 1/8W
R73	1-249-343-11	CARBON MELF 4.7K 5% 1/8W
R74	1-249-347-11	CARBON MELF 10K 5% 1/8W
R75	1-249-343-11	CARBON MELF 4.7K 5% 1/8W
R81	1-249-335-11	CARBON MELF 1K 5% 1/8W
R82	1-249-335-11	CARBON MELF 1K 5% 1/8W
R83	1-249-335-11	CARBON MELF 1K 5% 1/8W
R84	1-249-335-11	CARBON MELF 1K 5% 1/8W
R85	1-249-347-11	CARBON MELF 10K 5% 1/8W
R86	1-249-335-11	CARBON MELF 1K 5% 1/8W
R87	1-249-347-11	CARBON MELF 10K 5% 1/8W
R88	1-249-343-11	CARBON MELF 4.7K 5% 1/8W
R89	1-249-335-11	CARBON MELF 1K 5% 1/8W
R90	1-249-347-11	CARBON MELF 10K 5% 1/8W
R91	1-249-335-11	CARBON MELF 1K 5% 1/8W
R92	⚠1-249-401-11	CARBON (SMALL) 47 5% 1/4W F
R101	1-249-341-11	CARBON MELF 3.3K 5% 1/8W
R102	1-249-332-11	CARBON MELF 560 5% 1/8W
R103	1-249-335-11	CARBON MELF 1K 5% 1/8W
R104	1-249-328-11	CARBON MELF 270 5% 1/8W
R105	1-249-343-11	CARBON MELF 4.7K 5% 1/8W
R106	1-249-339-11	CARBON MELF 2.2K 5% 1/8W
R107	1-249-343-11	CARBON MELF 4.7K 5% 1/8W
R108	1-249-323-11	CARBON MELF 100 5% 1/8W

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref.No.	Part No.	Description				
R109	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R110 ⚠	1-249-405-11	CARBON (SMALL)	100	5%	1/4W	F
R111	1-249-341-11	CARBON MELF	3.3K	5%	1/8W	
R112	1-249-332-11	CARBON MELF	560	5%	1/8W	
R113	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R114	1-249-328-11	CARBON MELF	270	5%	1/8W	
R115	1-249-351-11	CARBON MELF	22K	5%	1/8W	
R116	1-249-339-11	CARBON MELF	2.2K	5%	1/8W	
R117	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R118	1-249-323-11	CARBON MELF	100	5%	1/8W	
R601	1-249-425-11	CARBON	4.7K	5%	1/4W	
R602	1-249-405-11	CARBON	100	5%	1/4W	
R603	1-249-429-11	CARBON	10K	5%	1/4W	
R604	1-249-405-11	CARBON	100	5%	1/4W	
R605	1-249-425-11	CARBON	4.7K	5%	1/4W	
R606	1-249-405-11	CARBON	100	5%	1/4W	
R608	1-249-433-11	CARBON	22K	5%	1/4W	
R609	1-249-441-11	CARBON	100K	5%	1/4W	
R611	1-249-441-11	CARBON	100K	5%	1/4W	
R612	1-249-441-11	CARBON	100K	5%	1/4W	
R613	1-249-417-11	CARBON	1K	5%	1/4W	
R614	1-249-405-11	CARBON	100	5%	1/4W	
R615	1-249-429-11	CARBON	10K	5%	1/4W	
R616	1-249-405-11	CARBON	100	5%	1/4W	
R617	1-249-405-11	CARBON	100	5%	1/4W	
R618	1-249-405-11	CARBON	100	5%	1/4W	
R619	1-249-405-11	CARBON	100	5%	1/4W	
R620	1-249-405-11	CARBON	100	5%	1/4W	
R621	1-249-405-11	CARBON	100	5%	1/4W	
R623	1-249-413-11	CARBON	470	5%	1/4W	
R624	1-249-413-11	CARBON	470	5%	1/4W	
R625	1-249-413-11	CARBON	470	5%	1/4W	
R626	1-249-413-11	CARBON	470	5%	1/4W	
R627	1-249-413-11	CARBON	470	5%	1/4W	
R628	1-249-405-11	CARBON	100	5%	1/4W	
R651	1-249-437-11	CARBON	47K	5%	1/4W	
R652	1-249-441-11	CARBON	100K	5%	1/4W	
R653	1-249-429-11	CARBON	10K	5%	1/4W	
R654 ⚠	1-249-405-11	CARBON	100	5%	1/4W	F
R655	1-247-903-00	CARBON	1M	5%	1/4W	
R656	1-249-405-11	CARBON	100	5%	1/4W	
R657 ⚠	1-249-405-11	CARBON	100	5%	1/4W	F
R658	1-249-441-11	CARBON	100K	5%	1/4W	
R661	1-249-441-11	CARBON	100K	5%	1/4W	
R662	1-249-405-11	CARBON	100	5%	1/4W	
R664	1-249-437-11	CARBON	47K	5%	1/4W	
R665	1-249-441-11	CARBON	100K	5%	1/4W	
R666	1-249-429-11	CARBON	10K	5%	1/4W	
R667	1-249-437-11	CARBON	47K	5%	1/4W	
R668	1-249-441-11	CARBON	100K	5%	1/4W	
R669	1-249-393-11	CARBON	10	5%	1/4W	
R670	1-249-429-11	CARBON	10K	5%	1/4W	
R701	1-249-429-11	CARBON	10K	5%	1/4W	
R802 ⚠	1-247-716-11	CARBON	1.8K	5%	1/4W	F
R809	1-249-437-11	CARBON	47K	5%	1/4W	
R810	1-249-437-11	CARBON	47K	5%	1/4W	

Ref.No.	Part No.	Description
RV21	1-238-013-11	(AEP,UK)...RES, ADJ, CARBON 2.2K
RV21	1-238-015-11	(WG,IT)....RES, ADJ, CARBON 4.7K
RV22	1-238-017-11	RES, ADJ, CARBON 22K
RV24	1-238-017-11	(AEP,UK)...RES, ADJ, CARBON 22K
RV24	1-238-019-11	(WG,IT)....RES, ADJ, CARBON 47K
RV651	1-571-955-11	SWITCH, ROTARY (TUNING)
S601	1-554-303-21	SWITCH, KEY BOARD (1)
S602	1-554-303-21	SWITCH, KEY BOARD (2)
S603	1-554-303-21	SWITCH, KEY BOARD (3)
S604	1-554-303-21	SWITCH, KEY BOARD (4)
S605	1-554-303-21	SWITCH, KEY BOARD (5)
S606	1-554-303-21	SWITCH, KEY BOARD (6)
S607	1-554-303-21	SWITCH, KEY BOARD (7)
S608	1-554-303-21	SWITCH, KEY BOARD (8)
S609	1-554-303-21	SWITCH, KEY BOARD (9)
S610	1-554-303-21	SWITCH, KEY BOARD (0)
S613	1-554-303-21	SWITCH, KEY BOARD (BAND)
S614	1-554-303-21	SWITCH, KEY BOARD (MEMORY)
S615	1-554-303-21	SWITCH, KEY BOARD (AUTO TUNING)
S616	1-554-303-21	SWITCH, KEY BOARD (MEMORY SCAN)
S617	1-554-303-21	SWITCH, KEY BOARD (SHIFT A)
S618	1-554-303-21	SWITCH, KEY BOARD (SHIFT B)
S619	1-554-303-21	SWITCH, KEY BOARD (SHIFT C)
S620	1-554-303-21	SWITCH, KEY BOARD (PRESET/FREQUNCY)
S901 ⚠	1-554-920-11	SWITCH, PUSH (AC POWER)(1 KEY)(POWER)
T21	1-404-807-11	TRANSFORMER, DISCRIMINATOR
T23	1-236-465-11	(WG,IT)...ENCAPSULATED COMPONENT
T901 ⚠	1-449-196-11	TRANSFORMER, POWER
TM1	*1-537-138-31	TERMINAL BOARD (ANT)
TP1	*1-560-060-00	PIN, CONNECTOR 2P
XT81	1-577-126-11	VIBRATOR, CRYSTAL (7.2MHz)

ACCESSORY & PACKING MATERIAL

1-465-194-11	REMOTE COMMANDER (RM-S920)
1-501-369-11	(AEP,IT,UK)...ANTENNA
1-501-374-11	ANTENNA, LOOP
1-558-543-11	CORD, CONNECTION
1-574-265-11	CORD (WITH CONNECTOR)
3-750-424-11	(AEP,UK).....MANUAL, INSTRUCTION
3-750-424-41	(AEP,WG,UK)...MANUAL, INSTRUCTION
*4-930-822-11	INDIVIDUAL CARTON
*4-930-835-01	CUSHION

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

9-953-814-11

Sony Corporation
Audio Group

English
89F0246-1
Printed in Japan
©1989.6
Published by A/V Engineering Service Dept.